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ecology and environment, inc.

160 SPEAR STREET, SAN FRANCISCO, CALIFORNIA 94105, TEL. 415/777-2811

International Specialists in the Environment

MEMORANDUM

TO: Paul La Courreye, EPA
FROM: Patty Cook, Ecology & Environment, Inc.
DATE: August 12, 1988
SUBJECT: Completed Work
cc: Marcia Brooks, Ecology & Environment, Inc.

This list is for the attached completed:

☐ PA(s)
☐ PA Review(s)
☒ PA Reassessment(s)
☐ SI(s)
☐ Other _____

PA2 complete
9/88
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<u>Site Name</u>	<u>EPA I.D.#</u>	<u>City</u>	<u>FIT Recommendation</u>	<u>State Lead</u>
Cosden Oil and Chemical Company	CAD000097634	Orange	mSSI	

✓ EYT → A, PA2, M, F, 090188

s/lf/cosden/para



ecology and environment, inc.

160 SPEAR STREET, SAN FRANCISCO, CALIFORNIA 94105, TEL. 415/777-2811

International Specialists in the Environment

MEMORANDUM

TO: Paul La Courreye, EPA Region IX Site Screening Coordinator

FROM: Lorene Flaming, Ecology and Environment, Inc. *LF*

DATE: August 12, 1988

SUBJECT: Reassessment of Cosden Oil and Chemical Company, Orange, California

EPA ID#: CAD000097634

THROUGH: Tom Carter, Ecology and Environment, Inc. *TC*

COPY: FIT Master File
Patty Cook, Ecology and Environment, Inc.
California Department of Health Services, Sacramento

INTRODUCTION

Under Technical Directive Document number F9-8709-019, Ecology and Environment, Inc.'s Field Investigation Team (FIT) has been tasked to reassess all Preliminary Assessments (PAs) in the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) with "active" or "pending" status according to guidelines established to implement the Superfund Amendments and Reauthorization Act (SARA). The strategy for determination of further action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is based solely on each site's potential to achieve a score high enough on the Hazard Ranking System (HRS) for inclusion on the National Priorities List (NPL). This strategy is intended to identify those sites posing the highest relative risk to human health or the environment. All other sites needing remedial or enforcement follow-up will be referred to the States or an appropriate Federal agency.

This site was evaluated primarily using the original HRS model. Additionally, this site was also evaluated for its potential to score using the draft revised HRS model. The following is a summary of FIT's findings with regard to this site.

s/lf/cosden/para

SUMMARY

Cosden Oil and Chemical Company (Cosden) is located at 534 Struck Avenue in a mixed residential/industrial area of Orange, California. Cosden operated this site from 1976 to 1984 as a division of American Petrofina. The facility produced polystyrene resin pellets until 1983, when operations switched to sales and packaging. The facility was classified as a RCRA Generator 1. In 1984 the site was sold to Coldwell Banker of Newport Beach and has since been leased and operated by Nursery Supplies, Inc.

In 1978 and 1986 Cosden reported two separate styrene "spills" to the EPA. Both were caused by tank fires resulting in the release of explosive gas and polymerized styrene. The 1978 incident involved 2 ruptured underground tanks containing a total of 52,000 gallons of styrene monomer (1). The 1982 incident involved a 6000 gallon above-ground tank (2). Both releases necessitated the evacuation of nearby residents and the immediate response of the Orange County Health (OCHD) and Fire Departments (OCFD). Most material was vaporized and released to the air or polymerized, forming a hardened mass within the tank. Styrene monomer may have entered nearby flood channels through runoff from fire control measures. However, an OCHD official who witnessed the 1982 incident recalls that runoff appeared free of waste, and that firemen sandbagged the 6000-gallon tank to contain any liquid monomer that may have been released (3). Containment factors for the 52,000 gallon 1978 incident are unknown other than that the tanks were unlined and buried in backfill and loose aggregate. Unfortunately, no record of cleanup for either incident could be found in agency files and remediation remains undocumented.

In 1984 the OCHD documented the removal of all visible wastes on-site and their subsequent disposal at a Class I landfill (4). Waste products removed and their quantities (in drums) include: polystyrene resin (4), solvent (2), acids (1), adhesives (1), sodium hydroxide (1), tetra butyl carbitol (1), solidified oil (1), and styrene monomer (1) (5).

It is uncertain if any underground tanks still exist on site. A site plan found in an OCFD file indicates that the prior owner, Sterling Plastics, installed seven underground tanks in 1975. OCFD records do not show that these tanks were ever registered and no documentation exists on their removal. A 1986 phone memo from the City of Orange Public Works Department indicates that documentation exists in their files on the removal of three tanks in 1982; however, personnel were unable to locate any record at this time. The company lawyer states that Cosden knew of the existence of six underground tanks and all were removed in 1983. Cosden is unable to provide any documentation other than the statement of a company employee who witnessed the removal.

The nearest well from site is located less than 2000 feet away and is privately owned by the Silver Springs Water Company. The nearest municipal well is less than 3000 feet away. Water is drawn from 150-180 feet and serves the City of Orange, with a population of 100,000. Geologic material is classified as gravel for the first 90 feet and a mixture of sandy clay and gravel from 90-150 feet (6).

The nearest surface water with beneficial use is the Santa Ana River, located one mile west of the site. The Regional Water Quality Control Board (RWQCB) basin plan indicates the river is used for agriculture, groundwater recharge, recreation, and wildlife. However, the RWQCB indicated that these uses occur primarily seven miles or more upstream or greater than 3 miles downstream (7).

No air release has been documented. A potential exists for an observed release to air if styrene-contaminated dust particles on-site become of airborne. Potential air target populations living within a 4-mile radius of the site include the entire areas of Orange (91,500) and Santa Ana (204,000), and parts of Garden Grove (123,300) and Anaheim (219,500) (8). No endangered species are known to exist within a 2-mile radius (9).

Available information indicates that a minimum of 58,000 gallons of styrene has been released on-site. Geologic material is moderately to highly permeable and groundwater serves a population of 100,000. Solvents and acids were also stored on-site. The site has never been sampled. Agency files are unable to provide several important pieces of information. Little is known of Cosden's waste management practices and no documentation can be found on remedial measures for either tank fire incident. In addition, agency files fail to confirm or refute Cosden's claim that all underground tanks have been removed. FIT has exhausted available resources and concludes that Cosden may pose a potential hazard to human health and the environment.

RECOMMENDATION

1) EPA

Based on the current HRS model, FIT recommends that a medium priority screening site inspection (mSSI) be planned under CERCLA for the Cosden Oil Chemical Company for the following reasons:

- o A very large quantity of styrene was released on-site;
- o Styrene is moderately toxic;
- o Solvents were stored on-site;
- o Moderately to highly permeable geologic materials underlie the site;
- o There is a significant number of groundwater targets;
- o The site has never been sampled; and
- o FIT is unable to confirm that all hazardous waste has been removed.

2) State or Other Agency

Copies of this reassessment will be sent to DOHS and RWQCB for their consideration.

EPA CONCURRENCE

Initial

Date

No Further Action Under CERCLA

High Priority SSI

Medium Priority SSI

RE

9/6/88

s/lf/cosden/para

References
(1) preliminary Assessment: Times article

- (2) orange co. Health, Division of Environmental Health: Emergency Hazardous Material Incident report, 11/30/82.
- (3) conversation recorded by many Osborne (DHS) with Bill Breckman (O.C. Health) 1/30/85.

- (4) conversation recorded by many Osborne (DHS) with Mark (O.C. Health) 12/28/84
- (5) orange co. Health Dept. determination inspection form, 7/84

- (6) conversation with city of orange water dept., Steve Smith 7/1/88
- (7) conversation with Joanne Snyder of the rivers 7/7/88

- (8) Round Mammally green guide: U.S. places with over 100 people (based on '80 U.S. census)
- (9) conversation with U.S. Fish & Wildlife, 7/5/88

- (10) The March Index
- (11) see (5)

- (12) conversation with Ken Rogers of O.C. Health Dept. 7/8/88
- (13) Newspaper article "Register"

- (14) city of orange planning department, conversation with Jim Reichert 7/8/88

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ter his oxygen supply ran out as he and others
sprayed water on the ruptured chemical tanks.

Times photo by Cliff Otto

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Wade said 100 firemen and trucks were called in from the area, Anaheim, Santa Ana, Huntington Beach and Orange County departments. About 25 Orange policemen blocked off the roads.

Telephone repairs and installations were delayed in Orange and East Orange because the Pacific Telephone Co. was inside the evacuation zone.

However, about 2½ hours after their regular starting time, 116 phone technicians were escorted by police to their trucks and tools.

Chemical Tanks Rupture; Orange Area Evacuated

BY J. MICHAEL KENNEDY
and CRAIG TURNER

Times Staff Writers

ORANGE—Two tanks containing 52,000 gallons of a highly explosive chemical ruptured early Monday, forcing 2,500 persons to flee homes and businesses in this Orange County city.

For five tense hours, firemen stood by as the chemical spewed from the tanks, turned to a heavier-than-air gas and blanketed the area surrounding the Sterling Plastics Co. at 524 Struck Ave.

Firemen said the fumes of the chemical could have exploded and burned with the right combination of heat and air. They said the chemical, styrene monomer, is in the same combustion category as gasoline.

The Orange fire department estimated that 2,500 persons were evacuated and dozens of businesses in the area could not open because of the danger of explosion.

The threat of explosion ended about 10:30 a.m., when all of the chemical had dissipated. Six firemen were treated for minor skin irritation and inhaling too much of the fumes, Fire Chief Harold Bougher reported.

Evacuated residents, who were taken to Red Cross centers set up at two junior high schools, were allowed to return home at about 11:30 a.m.

The rupture of the tanks was reported at about 5:45 a.m. Asst. Fire Chief Bill Wade said the explosive chemical has a flash point of 90 degrees Fahrenheit.

Another chemical was used as a coolant, but apparently not enough had been used, Wade said.

"If they don't get it in the tank, the heating process increases rapidly," he said.

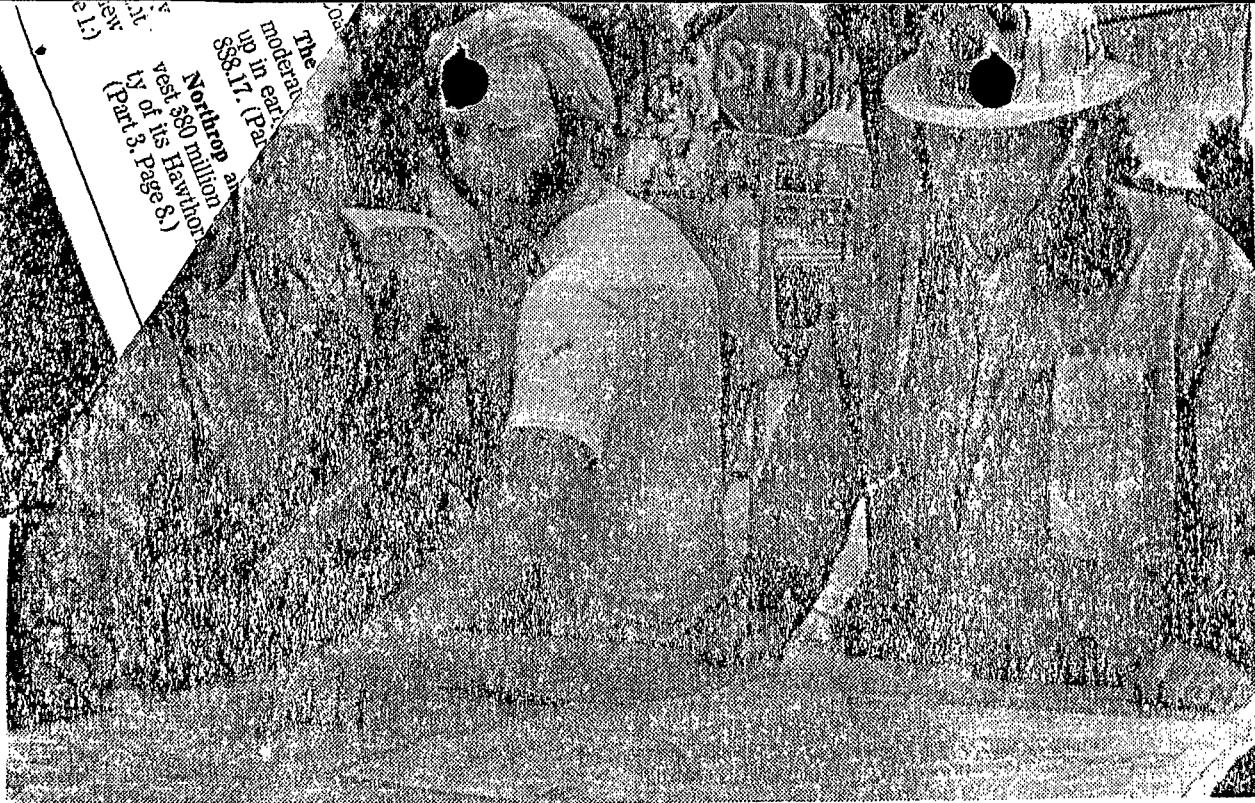
Workers in the plant reported the rupture after they saw a thick, fog-like cloud covering the floor and moving through machinery that could produce sparks, Wade said. The plant was shut down immediately.

"There was a slight overheating yesterday, and it apparently got real bad during the night," the assistant chief said.

Police were called in to block nearby streets and they went through the neighborhoods surrounding the plant, sounding sirens and using loudspeakers.

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COMMAND POST—Steven Adkins of plastics firm discusses the plant's layout with firemen. Times photo by Cliff Otto

Tanks Rupture; Area Evacuated

Continued from First Page
ers to order people to evacuate.

At first, the main area of evacuation was to the southeast—the direction the wind was traveling—but other streets were emptied later because of a wind shift.

By 8:30 a.m. the evacuation area had been widened to cover 1½ square miles, stretching from Main St. on the west to Grand Ave. on the east and from Walnut Ave. on the south to Trenton Ave. on the north.

Meanwhile, firemen set up hoses to spray a venting tank and keep it as cool as possible. Lon Cahill, a fire inspector, said the plastics company had more than 100,000 gallons of styrene monomer in storage tanks, plus

empty train cars containing vapors from the chemical.

Styrene monomer is used at the company to make plastic pellets, which are sold to other manufacturers for plastic products.

Wade said 100 firemen and 24 trucks were called in from the Orange, Anaheim, Santa Ana, Huntington Beach and Orange County departments. About 25 Orange policemen blocked off the roads.

Telephone repairs and installations were delayed in Orange and East Anaheim because the Pacific Telephone Co. was inside the evacuation zone.

However, about 2½ hours after their regular starting time, 116 telephone technicians were escorted by police to their trucks and tools.

Despite the concern over the danger of an explosion, Sterling Vice President Robert Curtis said later that styrene monomer is flammable, but not explosive.

Asked why there was an evacuation if there was no possibility of explosion, Curtis said he did not know.

"There was never any danger," he said.

However, Bill Swirl, environmental health and safety director at UC Irvine, said the chemical is both moderately flammable and explosive, besides causing short-lived irritation to the eyes, ears, and mucous membranes.

State industrial safety officials were investigating the cause of the rupture.

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CONTACT REPORT

AGENCY/AFFILIATION: Fina Oil		
DEPARTMENT :		
ADDRESS/CITY:		
COUNTY/STATE/ZIP:		
CONTACT(S)	TITLE	PHONE
1. James Veach	Lawyer	(214) 750-2810
2.		
E & E PERSON MAKING CONTACT: Lorene Flaming		DATE: 7/1/88
SUBJECT: Underground tanks		
SITE NAME: Cosden Oil and Chemical		EPA ID#: CAD000097634

Cosden Oil is a subsidiary of Fina Oil and Chemical. Jim states that there were only 6 tanks originally, not 7. The 1978 incident involved 1 tank which stayed underground until all 6 were removed in 1983. He offered to have an employee who witnessed the removal write a report but a similar letter is already in the file. I requested a copy of the contract between Fina and the former owner Granada Plastics which would document that only 6 underground tanks were sold to Fina, but Mr. Veach states this contract was lost at some point.

The company has never been able to provide documentation concerning the original number of tanks or their removal other than witness reports from memory.

CONTACT REPORT

AGENCY/AFFILIATION: Orange Co. Water District		
DEPARTMENT :		
ADDRESS/CITY:		
COUNTY/STATE/ZIP: Orange, CA		
CONTACT(S)	TITLE	PHONE
1. Nira Yamachika		(714) 963-5661
2.		
E & E PERSON MAKING CONTACT: Lorene Flaming		DATE: 7/5/88
SUBJECT: Santa Ana River - reach #2		
SITE NAME: Cosden Oil & Chemical		EPA ID#: CAD000097634

Santa Ana River flows year round between Prado Dam and 17th Street. Water is commingled with effluent from upstream wastewater treatment plant and rainwater. In dry season approx. 80% of the water comes from the plant.

CONTACT REPORT

AGENCY/AFFILIATION: city of Orange		
DEPARTMENT : water Dept.		
ADDRESS/CITY:		
COUNTY/STATE/ZIP:		
CONTACT(S)	TITLE	PHONE
1. Steve Smith		(714) 532-0356
2.		
E & E PERSON MAKING CONTACT: Lorene Flaming		DATE: 7/7/88
SUBJECT: Groundwater		
SITE NAME: Costen Oil & Chemical		EPA ID#: CAD000097634

well drilled 2 years ago at corner of Babunia & struck (<2000 ft.) Nearest well in 1982 was a private one owned by Silver Springs Water Co. which used it for bottled water (< 1/2 mile). Nearest municipal well at the time was at the corner of Main and Katella (<3000 ft.). Although the water system receives imported water, the water from these wells is not blended before delivery so customers in this area rely on these wells as their sole supply. System serves 400,000 people. Static water level at 132 feet. Drill log indicates these soil types:

- 0-10 dirt and rock
- 10-90 gravel and rock
- 90-110 brown sticky clay, sand, gravel
- 110-150 sandy, brown clay, rock chips, gravel
- 150-180 gravel and small rock

CONTACT REPORT

AGENCY/AFFILIATION: RWQCB		
DEPARTMENT :		
ADDRESS/CITY:		
COUNTY/STATE/ZIP: Orange, CA		
CONTACT(S)	TITLE	PHONE
1. Joanne Snyder		(714) 782-4130
2. Roger Turner		"
E & E PERSON MAKING CONTACT: Lorene Flaming		DATE: 7/7/88
SUBJECT: surface water use in orange county		
SITE NAME: multiwire west CAD086586682 cosden oil & chemical co. CAD000097634 Globe-Union CAD008323388 Alta Vista country club CAD98088945		EPA ID#:

Santa Ana River: (reach 2 stretches from 17th street to Prado Dam). Basin Plan indicates river is used for agriculture, groundwater recharge, recreation 1 & 2, and wildlife. Most recreation takes place above imperial freeway (closest site is greater than 2 1/2 miles downstream). Below the freeway all recreational uses are noncontact i.e. biketrails. Although present use in the area of the river effected by the 4 sites listed above is nonexistent, a recommendation has been made to encourage more recreational use.

Carbon Creek: No beneficial use, except for possible flood control

Fullerton Creek: No beneficial use, except for possible flood control

CONTACT REPORT

AGENCY/AFFILIATION: U.S. Fish & Wildlife		
DEPARTMENT :		
ADDRESS/CITY:		
COUNTY/STATE/ZIP: Orange, CA		
CONTACT(S)	TITLE	PHONE
1. Peter Stine		(714) 643-4270
2.		
E & E PERSON MAKING CONTACT: Lorene Flaming		DATE: 7/5
SUBJECT: Orange County Endangered Species		
SITE NAME: multiwire west CAD980586682 Alta Vista Country Club CAD98088945 cosden oil & chemical CAD000097634 Globe Union CAD008323388		

Only endangered species on Santa Ana are at the mouth of Newport Bay and up near Prado Dam.

No endangered species on small urban streams in Orange area. Sometimes species pass through but no nesting sites.

CONTACT REPORT

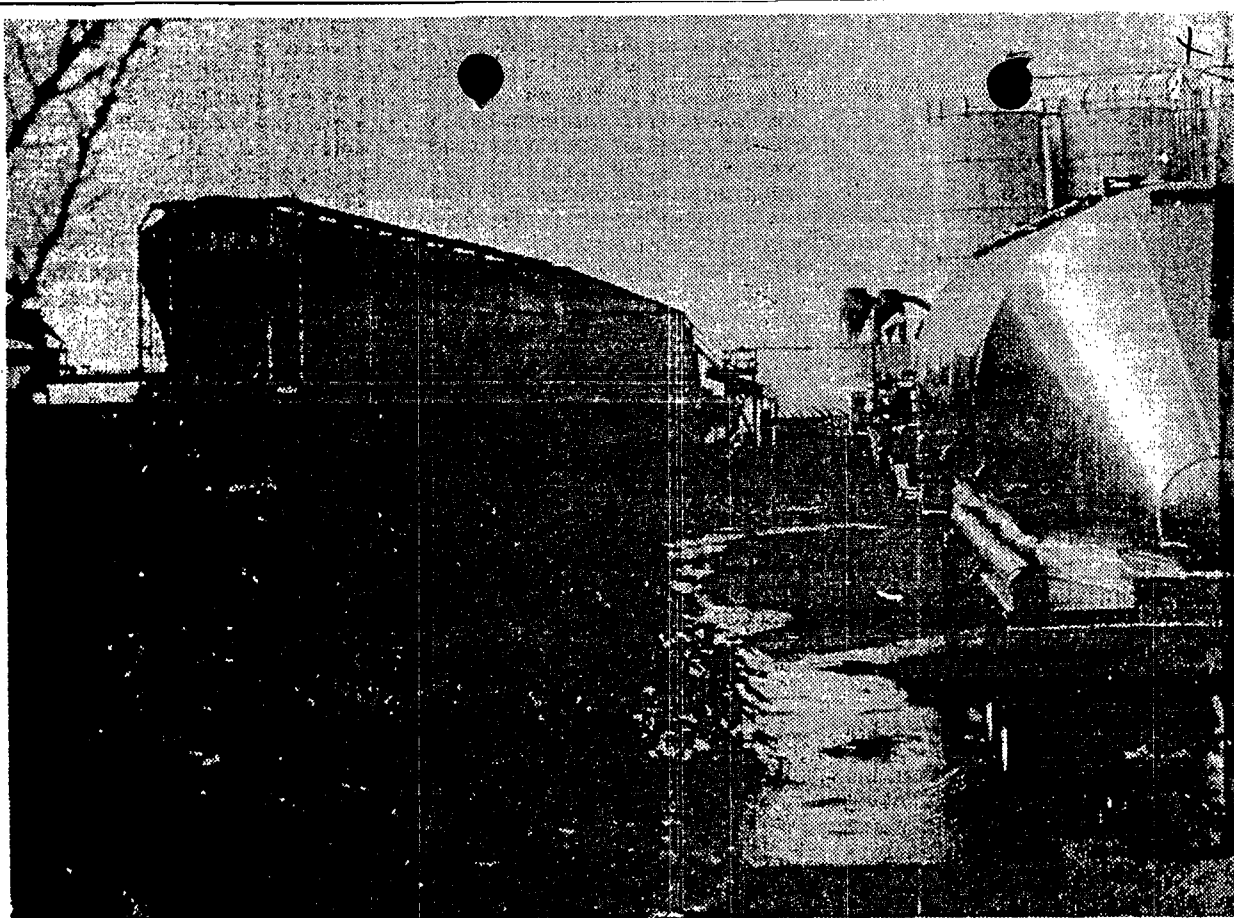
AGENCY/AFFILIATION: Orange Co. Health		
DEPARTMENT :		
ADDRESS/CITY:		
COUNTY/STATE/ZIP:		
CONTACT(S)	TITLE	PHONE
1. Ken Regier	Occupational Health	(714) 834-7717
2. Bill Dieckman	Toxics	(714) 834-8183
E & E PERSON MAKING CONTACT: Lorene Flaming		DATE: 7/8/88
SUBJECT: Tank fires		
SITE NAME: Costen Oil & Chemical		EPA ID#: CA0000097634

6/13/88

Both the 1978 and 1982 incident involved fires but not exactly explosions, although chemical vapors were released. Styrene is rather insoluble and he doesn't remember any large quantities of it released through the stream of water used to cool the tanks. Although fire department called for evacuation he doesn't feel styrene was significantly above the threshold limit. Tanks were buried in backfill and loose aggregate. 1978 below ground. 1982 above (cylinder tank 32' x 10' = 780 ft.³)

No file could be found under this name but he recalled the incident. In 1982 some polymerized styrene was released into the flood channels but the quantity was minimal. The majority of the material hardened within the tank, which was eventually removed.

Information concerning the 1978 spill is scarce or nonexistent. No good records were kept at the time. It involved the exact same type of reaction except the tank was underground. These incidents pose a vapor or explosion problem more than a groundwater threat because this type of reaction solidifies the waste into a "plastic blob".



(Register Photo)

FIREMAN CHECKS GROUNDS AROUND STERLING PLASTICS CORP. IN ORANGE
Officials Closed Plant After Toxic Cloud Billowed From Tanks

3,000 OC Residents Flee Chemical Cloud

By PATRICK MOTT
 Register Staff Writer

ORANGE — A deadly and potentially explosive toxic gas leak forced the evacuation of almost 3,000 people from homes and businesses in a square-mile area Monday morning as firefighters from seven departments fought to contain the gas cloud.

The evacuation began shortly after the leak was discovered at 6 a.m. Businessmen and neighboring residents were allowed to return to the area a little after 11 a.m. when the highly flammable gas had dissipated.

No one was seriously injured, but some firemen did report slight lung and skin irritation from inhaling and contacting the vapor.

A federal Occupational Safety and Health Administration official said the plant at which the leak occurred — Sterling Plastics Corp., 534 W. Struck Ave. — would be shut down "until we get some concrete answers."

"All production will be stopped,"

said William Loupe, an OSHA compliance safety engineer. "When I finally got hold of the management, there were too many unanswered questions. There was no guarantee that it wouldn't happen again tomorrow morning. Until the facts are obtained, we have no other course of action but to stop production to limit hazard and exposure."

Only those employees needed to fix the ruptured tank will be permitted to work at the plant until an inspection is completed, Loupe said.

"What created the reaction (in the tank) we don't know," said Loupe. "We could find out tomorrow or it could be a week. If there are violations involved, then, of course, the employer can be cited. There are monetary penalties involved depending on the severity of the violation."

The leak was discovered Monday morning by workers who noticed that a liquid resin being transferred between tanks had begun to thicken and

Please See TANKS, Page A2

Tanks Spew Toxic C

Continued From Page A1

give off a white vapor.

The resin, styrene monomer, is harmful if its vapors are inhaled and is highly flammable.

As clouds of the gas billowed over the area, firemen and police supervised the evacuation of the mostly industrial district. As the fumes spread, residents in nearby homes, apartments, mobile homes and some residents of dormitories at Chapman College were evacuated.

Throughout the morning, the evacuation boundaries were extended until they finally reached Trenton Avenue on the north, Shaffer Street on the east, Walnut Avenue on the south and Main Street on the west.

Red Cross emergency centers were set up at Yorba and Portola junior high schools to handle the evacuees, but few displaced residents arrived at either location.

The evacuees were advised by fire officials that the escaping vapors could cause dizziness or loss of consciousness. The vapor also is irritating to the eyes, nose and throat and can be fatal in high concentrations.

Assistant Orange fire chief Bill Wade said the resin is used by the company to make styrofoam pellets.

When the workers first noticed the escaping vapors, they shut down the plant's electrical system, fearing a spark would ignite the volatile fumes, a spokesman said.

When the expanding mixture in the tank blew a valve open, clouds of the white vapor blew skyward, spreading an acrid smell as far as the Orange Freeway.

The first blowout occurred in a 40,000-gallon underground tank and was followed by a similar forced leak in a 12,000-gallon above-ground tank about two hours later.

Firefighters directed water on the escaping fumes and the tanks, trying to keep the mixture cool and stable.

The two tanks later were capped without incident, and a fire official said the contents did not appear to be volatile. The valve in the ruptured tank was left open to allow the last puffs of the vapor to dissipate.

Fire investigators were told the newly unloaded styrene may have had an insufficient quantity of a coolant mixed with it, Wade said. The coolant is designed to prevent the sort of heat

The
 Register

Tuesday, Aug. 15, 1978

NO ILLNESS REPORTED

Residents Make Calm but Wary Retreat to Shelters

BY JANET CLAYTON
Times Staff Writer

ORANGE — Carmella Moniello is accustomed to sleeping through all the loud noise that emanates every morning from the factory next door.

So when she heard the blaring sirens and booming voices coming from bullhorns Monday morning, she turned over and went back to sleep in her mobile home at the corner of Glas-sell St. and Collins Ave.

The noise persisted and her husband August got out of bed. He raised the window, peered out and saw a fireman looking at him.

"What are you doing here?" the fireman exclaimed.

"I live here," still-drowsy Moniello replied.

"Well, you better get out now; every-one else is evacuated."

The Moniellos awakened in a hurry. They grabbed what clothes they could find, not entirely sure why they were leaving their home and possessions.

By then it was almost 8 a.m., and most of the neighborhood "looked like a ghost town," said Mrs. Moniello.

The evacuation took place because a ground tank had ruptured at a plastics company near Struck Ave. and Bata-via St., spreading highly flammable and toxic gases throughout the area.

Police and fire officers sealed off a 1½-square-mile area.

Stella Willette, a resident of the nearby Carriage Mobile Estates, said that when the police came knocking at her door at 7 a.m., the initial impact of the word "evacuate" was frightening.

"They just said 'evacuate immedi-ately,' and that was scary," she said. "It smelled like resin all over the place. As soon as I knew what it was all about, I was not so worried."

The evacuated residents were in-structed to take shelter at one of the two emergency centers staffed by the local chapter of the American Red Cross. Only about 20 persons came to the center site at Portola Junior High School.

"If it had happened in the middle of the night, we would have had real problems," said Det. Roger Braham, who was stationed at Portola. "But the way it happened, a lot of people had already gone to work."

Det. Mike Skogh expressed concern that some residents might have ignored the evacuation order.

"Sometimes, if people don't see blood, they don't react," he said. "But at this time of day, instead of coming here, I

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HOME AGAIN—August and Carmella Moniello back at the mobile home they had evacuated when toxic gases escaped from tank.

Times photo by Denis Jec...

RESIDENTS

Continued from First Page

imagine people might go to relatives' homes or go shopping."

About 100 persons showed up at the other evacuation site at Yorba Junior High School, which was located closer to the danger area.

Persons at the Yorba center re-ported seeing a huge vapor cloud hovering ominously over the plastics company at about 7 a.m. Some said the cloud was accompanied by a pungent odor, while others said they smelled nothing at all.

Miriam Ferguson, the nurse on duty, said that although the fumes have been known to cause eye irritation, no one had complained of any discomfort.

However, Dennis Wheadon, 21, said that by the time he was evacuated, his pet fish had died and his cat's eyes appeared to be watering. When he got the word at 11:30 a.m. that the area had been declared safe, he said he was going to pick up his cat from a friend's house and go back home.

Others were not so eager to return. When police reported that fumes were still strong in the vicinity of Carriage Mobile Estates, some residents opted to stay at the Yorba center for a few more hours, saying they were "rather nervous" about returning home.

The few remaining decided to make the most of the afternoon. One police officer sat at the piano and played original tunes, while residents drank punch and told evacuation stories into the mid-afternoon.

L.A. Herald Examiner 8-15-78

City of Orange Gas Leak

'Great Strategy' Averted a Disaster

By TIM HARRELL
Herald Examiner Staff Writer

It could have been a disaster. A violent explosion could have leveled a portion of the city of Orange.

But, everyone did what they were supposed to, according to Inspector Lon Kahill of the Orange Fire Department, and nearly 2,000 persons were safely evacuated yesterday after toxic fumes seeped from a storage tank at the Sterling Plastics Corp., 534 Struck Ave. They returned to their homes and businesses later in the day.

Fumes from the chemical styrene — used in the manufacture of Styrofoam cups and other products — created a potentially deadly cloud of vapors that spread over a two-square-mile area of the city.

"From our standpoint, the strategy was great," Kahill said. "We attempted to do away with any sources of ignition and we did."

Los Angeles fire officials said such a leak of dangerous fumes is not uncommon. So far this year it has occurred three times in Los Angeles County, and firefighters are prepared.

Capt. Jim Peck, head of the Los Angeles County Fire Department's petrochemical section, said firemen train regularly for such incidents. His three-man team of experts is dispatched immediately when such a leak is reported.

The fire department uses foam-spreading pumps stationed at strategic points in the county to respond to the emergencies.

The crews who man these special pumps are trained on how best to use the foam, or "light water," to smother the fumes.

"You can never prevent all accidents, but preventing the spread is the next best thing to preventing the accident," Peck said.

The Orange Fire Department was ready, too.

Minutes after the first report was received at 6:45 a.m., Chief Harold Bougher called in firefighters from seven neighboring communities.

Nearly 100 firemen were on the scene within an hour.

Monitors (automated fire hoses) were set up near the 12,000-gallon tank where the leak occurred, pouring thousands of gallons of water on the steel tank to keep it cool.

CONTACT REPORT

AGENCY/AFFILIATION: city of orange		
DEPARTMENT : Planning Dept.		
ADDRESS/CITY:		
COUNTY/STATE/ZIP: Orange, CA		
CONTACT(S)	TITLE	PHONE
1. Chuck Lau	Asst. Planner	(714) 532-0434
2. Jim Reichert	Senior Planner	
E & E PERSON MAKING CONTACT: Lorene Flaming		DATE: 7/8/88
SUBJECT: surface water use and population		
SITE NAME: Costen Oil & Chemical Co.		EPA ID#: CAD00097034

Santiago Creek used for flood control (and parking on dry days). No use for Santa Ana River.

Newspaper estimate of 3000 people within 1 mile of site is probably accurate. Within a 4 mile radius are 135,000 + people.